REMARKS

This Amendment is in response to the Office Action dated October 10, 2003. In the Office Action, the Examiner rejected claims 1-32 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,557,042 to *David* et al. (hereinafter *David*) in view of U.S. Patent No. 6,490,722 to *Barton* et al. (hereinafter *Barton*). No claims have been amended or cancelled herein. Claims 1-32 remain pending in the application. For the reasons set forth below, the Applicants respectfully request reconsideration and allowance of all pending claims.

CLAIM REJECTIONS - 35 U.S.C. § 103

To establish a *prima facie* case of obviousness, there must first be some suggestion or motivation to modify a reference or to combine references, and second be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. Third, the prior art reference (or references when combined) must teach or suggest all the claim limitations. M.P.E.P. § 706.02(j) from *In Re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Where claimed subject matter has been rejected as obvious in view of a combination of prior art references, a proper analysis under § 103 requires, *inter alia*, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed device; and (2) whether the prior art would also have revealed that in so making, those of ordinary skill would have a reasonable expectation of success. Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the Applicants' disclosure. *Amgen v. Chugai Pharmaceutical*, 927 F.2d 1200, 18 USPQ2d 1016 (Fed. Cir. 1991), *Fritsch v. Lin*, 21 USPQ2d 1731 (Bd. Pat. App. & Int'f 1991). An invention is non-obvious if the references fail not only to expressly disclose the claimed invention as a whole, but also to suggest to one of ordinary skill in the art modifications needed to meet all the claim

limitations. *Litton Industrial Products, Inc. v. Solid State Systems Corp.*, 755 F.2d 158, 164, 225 USPQ 34, 38 (Fed. Cir. 1985).

The examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. M.P.E.P. § 70602(j) from *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). Obviousness cannot be established by combining references without also providing evidence of the motivating force which would impel one skilled in the art to <u>do what the patent applicant has done</u>. M.P.E.P. § 2144 from *Ex parte Levengood*, 28 USPQ2d 1300, 1302 (Bd. Pat. App. & Inter. 1993) (emphasis added by M.P.E.P.).

Claims 1 and 28 respectively are method and system claims that are illustrative of the claimed invention. Claim 1 recites:

1. (Amended) A method, comprising:

broadcasting *meta-data* to one or more client systems, the meta-data including descriptions of content corresponding to respective data files *from among a plurality of data files **up for consideration for a future broadcast**;*

processing the meta-data at each of the one or more client systems to generate a content-rating interface via which content ratings corresponding to the plurality of data files may be obtained;

obtaining content ratings for respective data files via the content-rating interface;

receiving content ratings for the plurality of data files from the one or more client systems; and

broadcasting a selected portion of the plurality of data files to the one or more client systems in response to the content ratings received from the one or more client systems. (Emphasis added)

With respect to claims 1 and 28 (as argued in paragraph 5 as a method claim featuring limitations corresponding to the system claim of claim 28), the Examiner states:

David teaches the invention substantially as claimed (As in claim 28) including a system comprising: a broadcast server; and one or more client systems couple[d] to the broadcast server; wherein the broadcast server is couple[d] to broadcast data to one or more clients (col. 6, lines 10-36); wherein the one or more client systems are coupled to rate one or more of the plurality of data described by the data (col. 6, lines 37-59); wherein the one or more client systems are coupled to transmit to the broadcast server their ratings of data files (col. 7 lines 50-67 and col. 8, lines 1-14); wherein the broadcast system is coupled to select a portion of the plurality of data files in response to the ratings received from the one or more client systems (col. 10, lines 33-51); and wherein the broadcast system is further coupled to broadcast the selected portion of the plurality of data files (col. 8, lines 15-28).

The examiner acknowledges that David "does not explicitly teach broadcasting meta-data including descriptions of data files or a content rating table for rating files described by the meta-data." In view of this deficiency, the examiner asserts,

Barton teaches a system with a server that broadcasts meta-data including descriptions of a plurality of data files (col. 18, lines 19-50) and one or more clients coupled to rate in response to a content rating table one or more of the plurality of data files described by the meta-data, the content rating table generated responsive to data files previously accessed (col. 13, lines 7-40).

The examiner further states "it would be obvious to one of ordinary skill in the Computer Networking art to combine the teachings of David regarding a method for broadcasting information based on customer ratings with the teachings of Barton regarding broadcasting meta-data containing descriptions of data files and providing content rating tables because David suggests that use of other techniques known in the art for collecting user information (col. 7, lines 50-67 and col. 8, lines 1-2)."

As stated in the '632 abstract, David discloses,

A system for collecting user feedback in a data broadcasting system, the system for collecting user feedback including a multiplicity of user profile agents, each user profile agent being associated with one of a multiplicity of users of the data broadcasting system and being operative to create a user profile based on activity of the one user, a user profile subsystem associated with a plurality of user profile agents chosen from among the multiplicity of user profile agents and operative to derive an integrated user profile based on the plurality of user profiles created by the plurality of user profile agents, and a broadcasting agent operatively

associated with a broadcast center of the data broadcasting system and in operative communication with the user profile subsystem and receiving therefrom the integrated user profile.

Barton nominally relates to a software installation and recovery system (what is claimed in the '722 patent). However, for the purposes of the present obviousness rejection, *Barton* discloses details related to broadcasting and using television (TV) viewing objects and related attributes. In particular, *Barton* discloses a database distribution scheme that is employed by the well-known TiVo product and related TiVo services. The TiVo product is a personal video recording (PRV) device that is used to record television content and the like on a digital storage medium (*i.e.*, a hard disk). The database aspects relate to distributing data related to upcoming programming and collecting data relating to user viewing habits for the purpose of automatically selecting user preferences to be employed to select programming to be recorded.

The primary purpose of the TiVo product is time-shifting of broadcast content. That is, it is designed to record selected broadcast content via an easy to understand user interface and/or automated programming mechanism. It may also be used for "pausing" live TV.

With respect to the obviousness rejection of independent claims 1 and 28, the Examiner has acknowledged *David* does not explicitly teach broadcasting meta-data including descriptions of data files or a content rating table for rating files described by the meta-data. However, the Examiner asserts that such is taught by *Barton.* Applicant respectfully disagrees.

It is clear the *Barton* doesn't broadcast "metadata including descriptions of content corresponding to respective data files *from among a plurality of data files* **up for consideration for a future broadcast**." From the text cited in support of this teaching (col. 18, lines 19-50), *Barton* states,

> In a preferred embodiment of the invention, non-linear combinations may be used for weighting a preference item. For instance, using statistical models provided by the central site, the client may infer

that a heavily weighted preference for three attributes in conjunction indicates that a fourth attribute should be heavily weighted as well.

The list of preferred programs is generated as follows:

1. A table 504 is constructed which lists each possible program object attribute, and any preference objects for that attribute that are present are listed in that entry.

2. If the preference item is a string, such as an actor name, a 32-bit digital signature for that string is calculated using a 32-bit CRC algorithm and stored with the table item, rather than the string itself. This allows for much faster scanning of the table as string comparisons are avoided, at the slight risk of two different strings generating the same digital signature.

3. For each program object in the database, and for each attribute of that program, the attribute is looked up in the table. If present, the list of preference objects for that attribute is examined for a match with the attribute of the current program object. If a match occurs, the weight associated with that preference object is added to weighting associated with the program object to generate a single weight for the program.

4. Finally, the program objects are rank-ordered based on the overall weighting for each program, resulting in a list of most-preferred to least-preferred programs.

Given this final prioritized list, *a recording schedule is generated* using the methods described below, resulting in *a collection of recorded programs of most interest to the viewer.* (Emphasis added)

The foregoing section of the *Barton* specification does not describe what data are broadcast relating to description of content (*i.e.*, metadata). However, the specification does discuss this elsewhere. For example, col. 4, lines 45-65 states,

The Database of Television Viewing Information

FIG. 1 gives a schematic overview of the invention. *Central to the invention is a method and apparatus for maintaining a distributed database of television viewing information among computer systems at a central site 100 and an extremely large number of client computing systems 101.* The process of extracting suitable subsets of the central copy of the database is called "slicing" 102, delivering the resulting "slices" to clients is called "transmission" 103, delivering information collected about or on behalf of the viewer to the central site is called "collection" 104, and processing the collected information to generate new television viewing objects or reports is called "analysis" 107; in all cases, the act of recreating an object from one database within

another is called "replication" 105. Data items to be transmitted or collected are termed "objects" 106, and the central database and each replicated subset of the central database contained within a client device is an "object-based" database. The objects within this database are often termed "*television viewing objects*", "viewing objects", or simply "objects", emphasizing their intended use. (Emphasis added)

The central database contains a copy of all information for the system. It is desired to replicate "slices" of this information that are applicable to each client. For example, the central database typically stores information related to upcoming programming provided by multiple content providers (*e.g.,* cable providers such as Comcast, and satellite providers such as Dish Network and Direct TV). It is desired to provide a slice of this information that is relevant for a particular client to that client, such that the client receives information pertinent to his/her content provider and locality (referred to as a "domain"). This is further detailed in col. 10, lines 4-9:

For efficiency, objects to be replicated are gathered together into distribution packages, herein called "slices". *A slice is a subset of the television viewing object database which is relevant to clients within a specific domain,* such as a geographic region, or under the footprint of a satellite transmitter. (Emphasis added)

Further details of how slices are configured and transmission mechanisms are generally discussed from col. 10, line 61 to col. 13, line 6.

The database slice data that are broadcast **do not** relate to *content that is up for consideration for a future broadcast.* Rather, the television viewing objects relate to upcoming program content that is scheduled to be broadcast, and includes schedule information identifying when the content is to be broadcast so that the TiVo product can know what channel to tune to and what time to begin and end recording of selected programming. This is very significant.

A central premise of the present invention is to obtain client feedback data from which broadcast programming schedules may be derived. As such, there is a need to provide information to the clients on what content is up for consideration to be possibly broadcast – that is, what content potentially might be broadcast if there is a sufficient

demand for it. In stark contrast, the cited art provides information pertaining to what is already scheduled to be broadcast.

In particular, the information broadcast in *Barton* relates to content that is scheduled to be broadcast by various content providers. TiVo is not a content provider. However, TiVo does provide a service to simplify programming of TiVo PVRs. Aspects of this service relate to the database subject matter described in *Barton*. One aspect is that program guide information is updated on a regular basis by a service provider (*i.e.*, content provider). While the broadcast data does include attributes relating to program content, the purpose of these attributes is not directed to facilitating selection of broadcast content by a content provider. Rather, it is used for providing information about upcoming **scheduled** programming content. This is clearly articulated in col. 14, line 59 to column 15, line 15:

Processing of Television Viewing Objects by Client Systems

Television viewing objects may contain the following types of information: television program descriptions and showing times; cable, satellite or broadcast signal originator information, such as channel numbering and identification; viewer preference information, such as actors, genre, showing times, *etc.*; software, such as enhanced database software, application software, operating system software, *etc.*; statistical modeling information such as preference vectors, demographic analysis, *etc.*; and any other arbitrary information that may be represented as digital data.

Methods Applied to Program Guide Objects

Program guide objects contain all information necessary for software running in the client system to tune, receive, record and view programs of interest to the user of the client system, selecting from among all available programs and channels as described by objects within the database.

This program guide information is updated on a regular basis by a **service provider.** This is handled by the provider acquiring program guide information in some manner, for instance, from a commercial supplier of such information or other sources of broadcast schedule information. This data is then processed using well-understood software techniques to reduce the information to a **collection of inter-related viewing objects.** (Emphasis added)

As stated above, TiVo is not a content provider and has no control over what is broadcast by the content providers. Thus, there is no motivation for TiVo to broadcast metadata related to content that may not ever be broadcast and is used for the purpose of obtaining client feedback data via which demand for the content may be determined. Tivo is indifferent to what content will and will not be broadcast.

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious (see MPEP § 2141.02). The claimed invention of claims 1 and 28 relates to obtaining user preference information derived from metadata corresponding to data files (content) up for consideration for a future broadcast. *David* does not obtain ratings using data related to content that is up for consideration for a future broadcast. Rather, user profile (preferences) data is obtained by observing user behavior (*i.e.*, observing content that is viewed by a user):

> Each of the user profile agents 110 is preferably implemented in a combination of computing hardware and software, as is well known in the art, and is preferably operative **to observe the behavior of a user of the associated user station 100 and to create a user profile**, as described more fully below, characterizing the preferences of the user of the associated user station 100. (Col. 6, lines 37-43) (Emphasis added)

> Each user profile agent 110 is preferably operative, as described more fully below, to create a user profile describing the item-selection preferences of the user of the associated user unit 100. (Col. 8, lines 3-7)

Applicant respectfully asserts that in addition to not teaching or suggesting all of the claimed elements recited in claim 1 and 28, there would be no motivation to combine the teaching of *David* and *Barton*, and there would be no expected success in doing so. With regard to the combining *David* and *Barton*, the Examiner states "... *David* suggests that use of other techniques known in the art for collecting user information (col. 7, lines 50-67 and col. 8, lines 1-2)."

More explicit details of how user profiles are derived in *David* are discussed in col. 8, lines 33-54, with reference to FIGs. 2-4. This section states:

> A user profile is derived for each user of a multiplicity of data item users (step 170). It is appreciated that a wide variety of different methods, including methods known in the art, may be used to derive a user profile, and that a user profile may have any one of a wide variety of structures, including structures which are well known in the art. It is further appreciated that not every user need have exactly the same user profile structure as every other user.

> Reference is now additionally made to FIG. 3, which is a simplified pictorial illustration of a preferred embodiment of a user profile, useful in understanding the method of FIG. 2. In the example user profile of FIG. 3, a profile is depicted as a tree, in which each level represents a different level of information about user preferences, each node in the tree being represented as a vector, the sum of whose component values is 1.0. Reference is now additionally made to FIG. 4, which is a simplified pictorial representation of a multimedia document representation, useful in understanding the method of FIG. 2. It is appreciated that the example document representation of FIG. 4 is generally compatible with the example user profile of FIG. 3.

Although *David* states known techniques may be used to derive user profiles, it does not specify how such an unspecified technique could be combined to yield the user profiles used therein. Furthermore, the Office Action does not indicate the suggestion or motivation for the above modification of *David*, other than asserting the *David* states other techniques for collecting user information may be used. This is improper - the mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination (see MPEP § 2143.01). Under *Barton*, data relating to upcoming programming is used to facilitate recording of the programming. There is no suggestion in *David* that using data of the type used in *Barton* would be advantageous or successful.

It is clear that *David* and *Barton*, either alone or in combination, do not teach or suggest the recited elements and limitations of either of independent claims 1 and 28. Accordingly, the rejection of claims 1 and 28 should be withdrawn. In addition, each of

claims 1-13, which depend from claim 1, and 29-32, which depend from claim 28, are in condition for allowance for at least the same reasons as their base claims.

Applicant respectfully asserts that each of independent claims 7, 10, 14, 18, 21, 24, 26 and 28 are patentable over the cited art for similar reasons to those argued above with respect to claims 1 and 28. Claim 14 recites an apparatus that executes instructions to perform the server-side operations of system claim 28. Claims 7 and 10 are method claims that recite client-side operations substantially corresponding to similar operations performed by the clients in claim 28.

Independent claim 18 and 21 respectively recited apparatus' for performing the methods of claims 7 and 10. Claim 24 is a Beauregard claim corresponding to software for performing the server-side operations of the system of claim 28. Claim 26 is a Beauregard claim corresponding to software for performing the method of claim 31, which adds the further operation of "storing based on the content rating table a portion of the second plurality of data files broadcast by the server system" to the method of claim 7.

Conclusion

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments and accompanying remarks, independent claims 1, 7, 10, 14, 18, 21, 24, 26 and 28 are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any

informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 292-8600.

Charge Deposit Account

Please charge our Deposit Account No. 02-2666 for any additional fee(s) that may be due in this matter, and please credit the same deposit account for any overpayment.

Respectfully submitted,

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